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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/706,651

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7011

7590

11/22/2006

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EXAMINER

CONNELLY CUSHWA, MICHELLE R

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 11/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/706,651

Applicant(s)

ARONSON ET AL.

Examiner

Michelle R. Connelly-Cushwa

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9-17,19,20,22 and 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,9-17,19,20,22 and 23 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant's Amendment filed September 6, 2006 has been fully considered and entered.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6, 9-15, 19, 20, 22 and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Levin et al. (US 6,758,611).

Regarding claims 1, 6, 9 and 20; Levin et al. discloses an optical device (10) adapted to receive an optical fiber (14) having a core (15) through which optical signals propagate, the optical device (10) comprising:

- a housing (a ferrule, 20, as well as elements 25, 43, 47, 48 and 30 are all portions of the housing) having;
 - o an opening for receiving a terminal end of the optical fiber (14),
and
 - o a port located on a portion of the housing substantially opposite to the opening for receiving a terminal end of the optical fiber (14) and substantially opposite to the ferrule (20),
 - o wherein the base (30, 48) receives the ferrule (20);

- an optical component (35) having a first facet and a second facet, the second facet being parallel to the first facet, the first facet of the optical component contacting the terminal end of the optical fiber (14) so that the optical signals are incident upon the first facet, while the second facet of the optical component is disposed from the terminal end a distance that enables the optical signals which are internally reflected within the optical component to be substantially prevented from entering the terminal end of the optical fiber (see column 4, lines 9-11); and
- a mount (36) configured to position the optical component (35) within at least a portion of the port, wherein a portion of the second facet of the optical component contacts the mount, and wherein the mount is configured to hold a portion of the first facet of the optical component against the housing (32; see column 3, lines 50-54);
- wherein the first optical component (35) has a diameter larger than the diameter of the optical fiber (14), and the first optical component (35) is configured when the ferrule is placed inside the housing to abut the end of an optical fiber (14) placed inside the ferrule (20);
- wherein the mount (36) includes a post/protrusion (the post holds lens, 39), the post/protrusion extending into the ferrule (20), and the optical component (35) being supported by the post.

Regarding claim 2; the first facet is normal to the axis of the terminal end of the fiber (14).

Regarding claim 3; the optical component (35) may be glass (see column 4, lines 12-15).

Regarding claims 4 and 5; the port is adapted to receive an optoelectronic package (laser, 45).

Regarding claim 10; the port is configured to receive a second optical component (lens, 39, or laser, 45) therein.

Regarding claims 11-13 and 22; there is a region disposed between the first optical component (35) and the second optical component (39 or 45), wherein that region has a refractive index (the refractive index of air) that is lower than the refractive index of the first optical component (35, which is made of glass).

Regarding claims 14 and 23; a laser transmitter (45; a laser and mount for the laser, etc., form a transmitter optical sub-assembly) generates electromagnetic radiation carrying optical signals and a lens (39) in optical communication with the laser transmitter focuses the radiation upon the terminal end of the optical fiber (14).

Regarding claim 15; the optical component has an axis that is perpendicular to a facet formed at the terminal end of the optical fiber (14).

Regarding claim 19; the mount (36) includes a lip disposed about the periphery of the mount and one or more members extending from the periphery of the mount.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Levin et al. (US 6,758,611 B1).

Regarding claims 16 and 17; one of ordinary skill in the art would have found it obvious to have the optical component (35) have a thickness of less than about 2 mm or less than about 1 mm in order to achieve a desired coupling efficiency between the optical fiber and the laser in the invention of Levin et al., since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art (*In re Aller*, 105 USPQ 233), and that discovering an optimum value of a result effective variable involves only routine skill in the art (*In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980)).

Allowable Subject Matter

Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: claim 7 distinguishes over the prior art of record because none of the reference either alone or in combination disclose or render obvious an optical device as defined in

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claim 7, wherein the base comprises a protrusion that cooperates with the optical component to position the optical component within an opening of the ferrule.

Hence, there is no reason or motivation for one of ordinary skill in the art to use the prior art of record to make the invention of claim 7.

Response to Arguments

Applicant's arguments filed September 6, 2006 have been fully considered but they are not persuasive.

Applicant's have argued that Blair fails to disclose or suggest that the mount is configured to hold a portion of the first facet against the housing. Applicant argues that the step provided for mounting the spacer, 35, is used to engage the sides and not a first facet of the spacer. The step provided for mounting the spacer, 35, of Blair or Levin, stops the spacer (35) before the spacer enters the narrower portion of the ferrule by contacting the first facet of the spacer, as viewed in the Figures.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning the merits of this communication should be directed to Examiner Michelle R. Connelly-Cushwa at telephone number (571) 272-2345. The examiner can normally be reached 9:00 AM to 7:00 PM, Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney B. Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general or clerical nature should be directed to the Technology Center 2800 receptionist at telephone number (571) 272-1562.


Michelle R. Connelly-Cushwa
Patent Examiner
November 20, 2006